



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,688	05/14/2007	Kazunori Kaneda	Q96967	9004
23373	7590	02/19/2010	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			FISCHER, JUSTIN R	
			ART UNIT	PAPER NUMBER
			1791	
			NOTIFICATION DATE	DELIVERY MODE
			02/19/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM  
USPTO@SUGHRUE.COM

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,688	<b>Applicant(s)</b> KANEDA ET AL.	
	<b>Examiner</b> Justin R. Fischer	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Allowable Subject Matter*

1. The indicated allowability of claims 1-7 and 11 are withdrawn in view of the newly discovered reference(s) to Hahn (EP 434596). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn (EP 434596, newly cited).

Hahn teaches a pneumatic tire construction, wherein a wire coat is formed with a high modulus rubber composition (Column 1, Lines 4-8). More particularly, Hahn teaches a high modulus rubber composition comprising polydiene rubbers, such as natural rubber, and a polyester, wherein said polyester is formed by reacting a diacid halide and a diol, such as hydroquinone or resorcin (Column 3, Lines 15-40, Column 4, Lines 9-48, Column 21, Lines 25-41 and Lines 54+). In this instance, the claimed additive (defined by formula 1) is analogous to the above noted polyester as applicant specifically states that said additive is formed by reacting a diacid chloride and a diol, such as hydroquinone or resorcin. The reference further teaches that the rubber composition would include said polyester at a loading between about 2 phr and about

Art Unit: 1791

50 phr, which substantially incorporates all of the claimed loadings (Column 20, Lines 1-15). Given the general disclosure of Hahn, one having ordinary skill in the art at the time of the invention would have found it obvious to form the specific polyester of the claimed invention and include it at a loading between 0.1 and 10 phr absent any conclusive showing of unexpected results.

In regards to sulfur, it is well recognized that nearly all tire compositions include sulfur as it is recognized as one of the most conventional curing agents. It is further noted that Hahn even suggests that prior art methods involved increasing sulfur loadings beyond conventional loadings (Column 1, Lines 19+). A fair reading of the reference suggests that the rubber composition of Hahn, as i conventional in the tire industry, would have included sulfur as a curing agent (added during a productive step). Additionally, the claimed values between 1 and 10 phr represent those that are conventionally associated with curing agents and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed range.

With respect to claims 2 and 3, applicant teaches that the claimed additives are formed by reacting a diacid halide with resorcin (Paragraph 38) and such is expressly disclosed by Hahn as detailed above.

As to claims 4 and 5, the diacid halide of Hahn includes an alkylene group containing from 1 to about 12 carbon atoms (Column 21, Lines 25+).

Regarding claims 7 and 8, Hahn suggests each of synthetic isoprene rubber and natural rubber (Column 3, Lines 35+) and one having ordinary skill in the art would have

Art Unit: 1791

been amply motivated to form a rubber composition including the above noted rubbers individually or in combination (given the general disclosure of Hahn).

With respect to claim 11, as noted above, Hahn is directed to a high modulus rubber composition for a tire wire coat. One of ordinary skill in the art at the time of the invention would have recognized such language as including the carcass and/or belt since these components represent the fundamental components of modern day tire constructions. Additionally, it is well known and conventional to use steel as the "wire" detailed above.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneda (US 4,076,668, newly cited). As detailed above, Hahn is directed to a tire rubber composition usable as a wire coat composition. While Hahn is silent as to the additives used in the wire coat composition (e.g. fillers, tackifying agents, anti-oxidants, etc.), it is extremely well known and conventional to include organic acid cobalt salts in order to improve adhesion between the wires and the surrounding coating/topping rubber, as shown for example by Kaneda (Abstract and Column 1, Lines 5-30). One of ordinary skill in the art at the time of the invention would have found it obvious to include such a well known additive in the wire coat composition of Hahn for the reason set forth above.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

Art Unit: 1791

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer  
/Justin R Fischer/  
Primary Examiner, Art Unit 1791  
February 12, 2010